

AMENDMENTS TO THE CLAIMS

This Listing of Claims will replace all prior versions and listings of the Claims in the subject Patent Application:

Listing of Claims:

Claims 1-6 (Canceled).

Claim 7 (Currently Amended) A method for making an anti-microbial sanitary ware, comprising the steps of:

 placing a substrate in a sputtering chamber in a sputter;
 simultaneously sputtering a first metal target of a first metal and a second metal target of a second metal through closed-field unbalanced magnetron sputtering techniques;

 forming a continuously closed magnetic field around the substrate;
 reacting the first metal into a metal compound and subsequently depositing said metal compound on the substrate thereby forming a protective layer; and

 generating metal particles of the second metal having a size of less than 100 nanometers and dispersing said metal particles in the protective layer;
 wherein the second metal is selected from the group consisting of silver, zinc, and copper; and

wherein the metal compound is selected from the group consisting of metal nitrides and metal carbides;

wherein a negative biased voltage of greater than -80V is applied to said substrate;

wherein the sputtering for the first metal target is conducted at a voltage ranging from 20-50V, and a current ranging from 3.5-4.5A; and,

wherein the sputtering for the second metal target is conducted at a voltage of less than 20V, and a current ranging from 0.3-0.5A, said sputtering is conducted at a temperature ranging from 80-180°, at a pressure ranging from 0.1-20 mTorr for a sputtering time ranging from 3-13 minutes.

Claim 8 (Original): The method of Claim 7, wherein the first metal is selected from the group consisting of zirconium, chromium, and titanium.

Claim 9 (Original): The method of Claim 8, wherein the metal compound is selected from the group consisting of zirconium nitride, chromium nitride, and titanium nitride.

Claim 10 (Original): The method of Claim 9, wherein the substrate is made from a material selected from the group consisting of copper alloy, zinc alloy, stainless steel, ceramics, and plastics.

MR3701-50
Serial Number: 10/797,818
Reply to Office Action dated 7 February 2008

Claims 11-15 (Canceled).